State-Machine Configurator

Vision

Version 1.0

Revision History

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| 18.03.2020 | 1.0 | <details> | Sas Cosmin Andrei |
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Vision

# Introduction

[The purpose of this document is to collect, analyze, and define high-level needs and features of the <<System Name>>. It focuses on the capabilities needed by the stakeholders and the target users, and **why** these needs exist. The details of how the <<System Name>> fulfills these needs are detailed in the use-case and supplementary specifications.]

[The introduction of the **Vision** document provides an overview of the entire document. It includes the purpose, scope, definitions, acronyms, abbreviations, references, and overview of this **Vision** document.]

The purpose of this project is to simplify the interaction of a user with an embedded prototype. The user will be able to define an \*STM using a drag&drop interface.

## Purpose

The purpose of this project is to simplify the interaction of a user with an embedded prototype.

The user will be able to define an \*STM using a drag&drop interface.

## Scope

This project will aim for the developers that work on complex project that are hard to manage due to the increased number of components and signals.

## Definitions, Acronyms, and Abbreviations

\*STM – State Machine - A finite-state machine (FSM) or finite-state automaton (FSA, plural: automata), finite automaton, or simply a state machine, is a mathematical [model of computation](https://en.wikipedia.org/wiki/Model_of_computation). It is an [abstract machine](https://en.wikipedia.org/wiki/Abstract_machine) that can be in exactly one of a finite number of [states](https://en.wikipedia.org/wiki/State_(computer_science)) at any given time.

## References

[This subsection provides a complete list of all documents referenced elsewhere in the **Vision** document. Identify each document by title, report number if applicable, date, and publishing organization. Specify the sources from which the references can be obtained. This information may be provided by reference to an appendix or to another document.]

## Overview

In the following pages I will present the overall project and it’s usage.

# Positioning

## Problem Statement

[Provide a statement summarizing the problem being solved by this project. The following format may be used:]

|  |  |
| --- | --- |
| The problem of | Managing complex embedded systems |
| affects | Developers of those projects |
| the impact of which is | Simplifying the creation and maintenance of a system |
| a successful solution would be | Will be able to generate VALID C Code for the systems |

## Product Position Statement

The application would be used on the maintenance of automotive projects.

|  |  |
| --- | --- |
| For | Automotive companies |
| Who | Develop or maintain embedded projects |
| The STM Configurator | is a Development platform |
| That | Simplifies the creation and maintenance of projects |
| Unlike | NodeRed |
| Our product | Is focused on hardware projects |

[A product position statement communicates the intent of the application and the importance of the project to all concerned personnel.]

# Stakeholder and User Descriptions

This tool is supposed to be used from the beginning until the end of a project, being able to generate and modify the code. I have seen that some projects require hardware-oriented engineers which sometimes might have some problems at coding. This application should combine the power of those engineers with the one of the clean writer code.

## Stakeholder Summary

[There are a number of stakeholders with an interest in the development and not all of them are end users. Present a summary list of these non-user stakeholders. (The users are summarized in section 3.2.)]

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Hardware Engineer | Hardware Engineer | Develop a hardware system |

## User Summary

[Present a summary list of all identified users.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Hardware Engineer | Development of the Hardware part | Designs the physical part |  |
| Programmer | Development of the Software part | Designs the software part |  |

## User Environment

The platform is supposed to be Linux and Windows friendly, being written in Python. So the user can use it in any environment that permits the usage of a laptop for example.

The time of the task should be reduced comparing it to the time of writing code.

# Product Requirements

The only requirement is a potato PC that has Pyton installed.